

# **System Configuration Team (SCT)**

## **Reasonable & Prudent Measure #26**

### **Meeting Notes**

**November 8, 2000**

#### **Greetings and Introductions.**

The November 8 meeting of the System Configuration Team was held at NMFS' Portland offices. The meeting was chaired by Bill Hevlin of NMFS and facilitated by Trish McCarty. The agenda and a list of attendees for the November 8 meeting are attached as Enclosures A and B.

The following is a distillation (not a verbatim transcript) of items discussed at the meeting, together with actions taken on those items. Please note that some enclosures referenced may be too lengthy to routinely include with the meeting notes; copies of all enclosures referred to in the minutes are available upon request from Kathy Ceballos of NMFS at 503/230-5420.

#### ***1. Report on Grand Coulee Gas Abatement Alternatives Study.***

Kathy Frizell and Elizabeth Cohen provided a presentation on the structural alternatives for TDG abatement at Grand Coulee Dam. The purpose of today's presentation is to discuss the results of our feasibility analysis of three alternatives, Frizell explained; she used a series of overheads to familiarize the SCT with the basic layout of the project. The feasibility alternatives include:

- Extend and cover for submerged release (to transfer TDG production)
- Deflectors for mid-level outlets (to reduce TDG production)
- Forebay pipe with cascade (to de-gas, lowering reservoir TDG levels)

Frizell and Cohen continued on through their presentation, touching on design flow and TDG

evaluation, design elements, the hydraulic models used, existing outlet works flow conditions, the design and TDG results for the three alternatives considered, the effects of joint operation, and a summary of the report's findings. Copies of these overheads are attached as Enclosure D; please refer to this document for details of Frizell's presentation.

Summarizing the "extend and cover" alternative (Alternative 1), Frizell said this alternative is expected to provide a reduction TDG of 11%-15% compared to the existing configuration of the project; confidence is high that this alternative will perform well. Construction would take about three years and cost approximately \$96 million. In other words, said Rod Woodin, while this alternative does produce 11%-15% less gas than the present system, it will not yield enough of a reduction to meet the 110% TDG standard. That's correct, Frizell replied.

Summarizing the "deflectors for mid-level outlets" alternative, (Alternative 3), Frizell said this option produced a 13% reduction in TDG over the existing condition; however, due to the violent flow conditions produced, the BOR has the least amount of confidence in the TDG performance of this alternative. Construction would take three years and cost \$15.6 million, although this cost could rise due to the possible need to modify the channel downstream.

Summarizing the "forebay pipe with cascade" alternative (Alternative 5), Frizell said this extremely complex option produced a 13.5% reduction in TDG over the existing condition; it would cost \$437 million over a four-year construction period. She noted that this number includes \$47 million in lost power revenue due to the need to shut down one unit for nine months; this is based on the current price of power, 23 mils.

In summary, said Frizell, the three structural alternatives provide a TDG benefit of between 11% and 15% over existing conditions; the cost of these alternatives would be between \$15.6 million and \$437 million. None of the alternatives appear capable of reducing TDG levels below Grand Coulee to the 110% standard.

Frizell also touched on the effects of transferring spill from Grand Coulee to Chief Joe, increasing Grand Coulee generation. If 20 Kcfs is specified as the level of this spill transfer, joint operation would produce an estimated 5%-7% reduction in TDG levels, with no capital investment.

In summary, said Frizell again,

- River TDG levels are more dependent on reservoir TDG levels than that of the structural alternative spill
- The three alternatives provide a TDG benefit of between 11% and 15% over the existing

condition.

- Costs: \$96 million for extend and cover, \$15.6 million for deflectors and \$437 million for the forebay cascade. This does not include O & M costs, which are unknown at this point.
- None of the alternatives will meet the 110% TDG standard except when reservoir TDG levels are at or below 105%.

Given the fact that, unless you can keep incoming TDG levels very low at Grand Coulee, you will not be able to meet the 110% standard, does this mean Reclamation may be interested in engaging at a higher level in negotiating Canadian water quality issues? Mary Lou Soscia asked. I can't answer that at this time, Frizell replied – these are our technical results, and the benefits associated with these alternatives. That's a policy call that will have to be made at a much higher level than the people in this room, Monte McClendon added.

So if we do the spill transfer and choose one of the alternatives, the total TDG benefit would be in the 13% to 17% range? Woodin asked. Correct, Frizell replied, although she warned that this analysis is extremely complex, and the actual results are heavily dependent on the shape of the hydrograph, total flow, incoming gas levels and other factors.

## **2. Progress Update on Chief Joseph Flow Deflectors .**

Beth Coffey, project manager for the Chief Joseph gas abatement project, said her purpose today was to update the SCT on the progress of this project. The general re-evaluation report is now complete; it has been internally reviewed, and we have also asked outside various agencies and contractors to perform an extensive technical review, Coffey said. That document was submitted to Corps headquarters in May; in September, the project was approved for construction in FY'02. We are now waiting to complete design work, award contracts and get construction underway, she said; the current estimate is that construction will be complete by February 2005.

We have now finalized all of the necessary environmental documents, including the Environmental Assessment, 404 documentation and 401 certification, Coffey added. If we get funding in FY'02, she said, we will move forward with finalizing the design, award contracts and begin to prep the construction area. Construction will then proceed in FY'03; the FY'05 completion date is the worst-case scenario, Coffey said. The important thing is completing the design phase and getting the contract awarded in a timely manner, she said. Coffey added that there are still a few outstanding design issues that need to be resolved; she distributed Enclosure C, which detailed the timeline and remaining design challenges associated with this project.

Will the deflectors completed during the first year of construction be available for use in the following year? Rod Woodin asked. We're not sure at this time, Coffey replied – the only concern is irregularities in gas production and spill pattern as a result of using some deflected and some undeflected bays. We'll be modeling that, and will let you know the results. In response to a question from Hevlin, Coffey said the deflectors were designed to handle a total river flow of 300 Kcfs and up to 133 Kcfs of spill. Steve Rainey observed that 300 Kcfs was the highest flow experienced during the extremely high flows of 1997; it occurred for only a few hours.

You have asked for appropriations for this project for the last two years, said Hevlin – do you think those funds will continue to be forthcoming? We hope so, Coffey replied; we've done everything we are supposed to in order to obtain funding, and while you never know exactly what Congress is going to do, we feel good about our chances. In response to another question, Coffey said the total cost of the Chief Joseph flow deflector project is just over \$28 million.

### **3. Update on Bonneville Five-Year Planning Effort.**

Last meeting, we started talking about re-working the Bonneville project 5-year plan, to help us make the decision on B1 in the early spring, said Hevlin; I asked Doug Clark to update us on how that effort is going. Clark distributed Enclosure E, a summary of the B1 decision document. Clark spent a few minutes going through this document, touching on the background for this effort, the topics addressed at the November 3 special FFDRWG kickoff meeting, the agenda items that will be addressed at the November 17 SIMPAS model parameters meeting, and the following next steps:

- Identify the combinations of alternatives (gas fast track, B2 surface bypass, B1 deep slot, B1 ESBS/JBS improvements, adult fallback, JBS improvements without ESBS, shallow B1 surface bypass, B1 no screens, turbine improvements) to be evaluated
- Goal is to reach consensus on the B1 development plan by March 2001 in case the decision is made to implement B1 JBS improvements to utilize FY'02 in-water work window. If consensus cannot be reached by March 2001, the work window will shift to FY'03.

Clark noted that, at the November 3 FFDRWG meeting, general agreement was reached on the operational scenarios (split between project paths) to be evaluated, including existing conditions, additional spill due to fast track, and reduced spill. He added that results from the 2000 monitoring season will be available in December. Kim Fodrea suggested that the Corps may want to change the name of this plan in order to avoid confusion with the five-year planning process called for in the BiOp. It's actually called the "Bonneville 1 Decision Document and Five-Year Plan," Rainey observed – I think that explains it pretty well.

#### **4. Review and Discussion of FY'02 CRFM Program**

Hevlin asked whether any of the other SCT participants had anything to add to the current list of FY'02 projects; no additional projects were recommended at this time. John Kranda distributed Enclosure F, a revised version of the CRFM measures worksheet, and spent a few minutes going through its contents. Basically, Kranda said, the Corps doesn't see any other projects that need to be added to the FY'02 project list.

The group spent a few minutes discussing this list; among the topics discussed were the possibility of adding removable spillway weir investigations at The Dalles, Bonneville and other projects, as well as a potential habitat improvement project for the Ives Island chum spawning below Bonneville Dam. Marv Yoshinaka said he would like to take this list to next Tuesday's FPAC meeting and discuss its contents, and some potential additional items, with the other FPAC representatives. It was agreed that FPAC will provide any additional line-items as soon as possible directly to Kranda.

Next steps on this agenda item? McCarty asked. The Corps will have to resubmit its FY'02 budget by the end of this calendar year, Hevlin replied; this is the second step in the budgetary process. At this point, we have to be sure that the shopping list is complete before it is submitted. It was agreed that the group will discuss the list further at the December SCT meeting.

#### **5. Update on FY'01 CRFM Appropriation and Budget.**

Kranda said the CRFM appropriation was, as expected, \$81 million for FY'01. The bad news is that it now appears that our actual work allowance will be only 84% of that total, because Congress decided to impose 16% savings and slippage, Kranda said – that leaves us a work allowance of only \$68 million. The last estimate we have of the total cost of the FY'01 CRFM program is \$86 million, he said; that's a very large gap between our funds in hand and the spreadsheet total.

We should know fairly soon how much of that savings and slippage can be recovered in FY'01, Kranda said; it is even more uncertain whether we can get anything more than that back into the program. It may be later in the year before we know how much, exactly, we'll have to spend, so we're sharpening our pencils again. With that in mind, said Kranda, you will notice a number of items highlighted in green in the new version of the spreadsheet; these are items for which the cost estimates have now changed. Items highlighted in yellow are those we are now recommending be deferred; items highlighted in grey are the Bonneville 1 decision items, for which a funding decision will have to be made by March 2001.

The bottom line is that the revised cumulative cost of the FY'01 CRFM program is now about \$74.7 million, Kranda said; this does not include anything for B1 JBS/outfall construction or for Ice Harbor auxiliary water supply construction. If those two items are added, that would bring the total cost of the program to just over \$82 million. However, if we go with the \$74 million figure, it is probably reasonable to assume that we can get \$6 million of the \$13 million that is being deducted for savings and slippage back, Kranda said.

What kind of input do you need from the group today? McCarty asked. Concurrence, Kranda replied. The group spent a few minutes reviewing the revised spreadsheet, touching on each of the green-highlighted items – newly-deferred items and items for which the cost estimate has changed. Among the line-items tagged for further discussion were McNary adult fallback reduction, Ice Harbor auxiliary water supply, the system juvenile lamprey evaluation, and the Ice Harbor and McNary spillway efficiency/survival studies. Hevlin observed that he would hate to see items on the first page of the spreadsheet deferred while items on the second page, which SCT gave lower priority, are funded. Otherwise, he said, we are setting aside all of the SCT's months of hard work. Tom Lorz agreed. Other items singled out for potential deferral included Estuary AFEP and the turbine passage survival study.

Hevlin observed that it should be possible for the SCT to reach consensus on a adjusted version of this CRFM spreadsheet, making the cuts and deferrals needed to achieve a trimmed-down \$68 million program. The discussion moved on to the John Day extended-length screen program for FY'01; Kranda distributed Enclosure G, a handout summarizing the various options available for this program in 2001. After a few minutes of debate, it was agreed that both the John Day ESBS issue and the systemwide issues probably need some additional discussion before the SCT can develop a recommendation. Kranda said he will find out what the drop-dead date is for the decision to change over to 1.75 mm bar spacing for the John Day ESBS, and will report back to the SCT. Hevlin observed that FFDRWG is the right group to decide on the 1.75 mm vs. 1/8" bar spacing issue (see Enclosure G).

After a few minutes of further discussion, Hevlin said NMFS supports Option 3 of Enclosure G (continue with the current plan). He laid out the following issues: is it appropriate to cut the \$1 million for studies and defer biological testing in FY'01, and which screen should the Corps be building – the 1.75 mm screen or the 1/8" screen? Christine Mallette said she would like to take a few days to seek internal input at ODFW before making a recommendation. Ultimately, it was agreed to set up an ad hoc FFDRWG meeting, involving Yoshinaka, Mallette, other FFDRWG participants and outside experts as necessary, to discuss the evidence for and against modifying the John Day VBS and ESBS bar screen to 1.75 mm. Hevlin said he would ask Rock Peters to set up this ad hoc meeting prior to the next SCT meeting.

In response to a question from Woodin, Kranda said he doesn't see any upcoming funding decisions on the lower-priority items that will preclude funding for some of the higher-priority items the Corps has tentatively recommended for deferral – in other words, there are no decisions that have to be made between now and next SCT meeting that will jeopardize other line-items for FY'01. I certainly wouldn't have any major concerns if we add a few items back in, and that puts the cost of the package at \$75.5 million rather than \$74.2 million, he said.

#### **6. AFEP Annual Review.**

Kranda distributed Enclosure H, the agenda for the AFEP annual review.

#### **7. Next SCT Meeting Date.**

The next meeting of the System Configuration Team was set for December 13. Meeting notes prepared by Jeff Kuechle, BPA contractor.